Practical 13

AIM: - Implement your own ping program

CODE:

```
import os

import platform

import subprocess


host = input("Enter host to ping: ")

param = "-n" if platform.system().lower() == "windows" else "-c"

command = ["ping", param, "1", host]

result = subprocess.run(command, stdout=subprocess.PIPE, text=True)

print(result.stdout)

if result.returncode == 0:

    print("Host is reachable")

else:

    print("Host is not reachable")
```

ALGORITHM:
1. **Start the program.**
2. **Import necessary modules** like os, platform, and subprocess for executing system ping commands.
3. **Take the hostname or IP address** as input from the user.
4. **Check the operating system** using platform.system() to decide which ping command format to use (ping -n 1 for Windows or ping -c 1 for Linux/Mac).
5. **Execute the ping command** using subprocess.run() to send one ICMP echo request.
6. **Capture the output** and display whether the host is reachable or not.
7. **Measure and display** the response time (Round Trip Time).
8. **Stop the program.**

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Input:

Enter host to ping: google.com

Output:

Pinging google.com [142.250.193.78] with 32 bytes of data:
Reply from 142.250.193.78: bytes=32 time=25ms TTL=118

Ping statistics for 142.250.193.78:
   Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
   Minimum = 25ms, Maximum = 25ms, Average = 25ms
Host is reachable